

## Claims

1. Method for mapping layer-3 packets over Synchronous Digital Transport Networks (SDH/SONET) and/or Optical Transport Networks (OTN), said method comprising the steps of:
  - setting up SDH/SONET and/or OTN connections over respective  
5 networks;
  - setting up a modified PPP protocol of PPP packets, without the LCP and NCP protocols for negotiation;
  - inserting the layer-3 packets in the modified PPP packet;
  - adding a GFP header of a GFP mapping layer to the the modified PPP  
10 packet, to get GFP packets;
  - setting a new value of UPI (User Payload Identifier) field in the GFP header;
  - transmitting GFP packets so obtained over the SDH/SONET and/or OTN networks.
2. Method according to claim 1, wherein said modified PPP protocol  
15 of PPP packets comprises:
  - a PPP header, field Protocol, the value of which identifies the type of layer-3 payload;
  - the said layer-3 payload, comprising in turn an header and a payload  
part;
  - a PPP tail, field FCS, used for error checking of the PPP packet.  
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3. Method according to claim 1, wherein said layer-3 packets are MPLS or IP or IPX or IPv6.
4. Method according to claim 1, wherein said GFP header comprises the following fields:
  - 25 - PLI: payload length indication;
  - HEC: Header Error Check, with the following possibilities:
    - cHEC: core HEC, check on the Header field;
    - tHEC: type HEC, check on the Type field;
    - eHEC: extension HEC, check on the Extension header;

- PTI: Payload Type identifier;
- PFI: Payload FCS identifier;
- EXI: Extension Header identifier;
- UPI: User Payload identifier: the said new value of UPI.